January 31, 2011

Gary Gill, Director
Clean Water Branch
Environmental Management Division
State Department of Health
P.O. Box 3378
Honolulu, HI 96801-3378

Subject: NPDES HI R10D698 Permit Violation Complaint Against Delta Construction

Dear Mr. Gill,

The Enchanted Lake Residents Association (ELRA) wishes to lodge a complaint against Delta Construction Co. for violation of the terms of their NPDES permit reference No. HI R10D689 that resulted in the direct pollution of the State Waters of Kaelepulu Pond with excess turbidity and total settleable solids (TSS). The polluting sediments are the result of insufficient BMPs on Delta's Kaopa Hillside development (TMK:42004037) during the grading phase of their construction. ELRA is the owner and is responsible for the maintenance of Kaelepulu Pond. We have tried unsuccessfully to work with representatives of Delta Construction on this matter. In the absence of cooperation from the contractor we have collected data that we believe demonstrates the excessive quantity of sediment released to City storm drains and subsequently to the State and Federal navigable waters of Kaelepulu Pond. On the basis of this evidence we request that the Department of Health cite Delta Construction for a violation of their NPDES permit conditions. Given this citation, and in the future absence of cooperation from Delta Construction, it will be our intention to seek compensation through the court system under the authority of the Federal Clean Water Act for the sediment deposited within Kaelepulu Pond.

The Kaopa subdivision consists of about 2.5 acres of land on hillside slopes above the northeast side of Kaelepulu Pond in the community of Enchanted Lake, Oahu. In November of 2010 the contractor began clearing land at the project site to make way for the construction of up to 10 homes. We contacted Delta Construction, were assured that their site was under adequate runoff control through their BMP plan, and were told we could obtain a copy of the plans and permits through the DOH. Your department was very cooperative with our request and supplied us with electronic files containing the appropriate BMP plans, drainage calculations, and permits relative to the project. Figure 1 in this letter is derived from their drainage plan permit and shows the two principle City storm drains that flow to Kaelepulu Pond at discharge points A and B. Following review of the plans, we expressed our concern that the BMPs were not likely to be adequate and showed preliminary evidence of this to the contractor (see attached letter). Rather than address this problem in a direct manner, the contractor has chosen not to communicate with us on this matter.

The construction site drains predominantly to two existing City storm drain inlets. Inlet A1 (See Figure1) was designed to intercept hillside runoff from a small settling area above homes on Akiahala Street and joins the storm drains beneath Akiahala at manhole #27487 (note: manhole numbers are from the City's GIS website database) just south of the intersection with Akele Street, and directs this runoff beneath Keolu Drive at outfall #27484 to Kaelepulu Pond. The second inlet (B1) enters the City storm drain at Akipohe Street at the entrance to the LakeView Estates via a concrete interceptor trench behind homes on Akiahala. This storm drain enters Kaelepulu Pond at a submerged Outfall B located between home lots at 455 Keolu and 453 Keolu. A third drain, the Kaopa Canal (adjacent to Kaelepulu School, and Kukilakila Condos) received a great deal of runoff from the site during the December 19 flow event by way of Akipola Street when the BMPs at the construction site entrance were overwhelmed allowing silt laden storm water to flow down the street and enter storm drains leading to this outlet.

We have collected evidence from two subsequent storms (12/19/2010, 8.8-inch rainfall; 1/12/2011, two 1.7-inch rainfall events) that include the following:

1. Runoff data from a near-by (1/2 mile) USGS gage indicates that the December 19 rainfall/runoff event was not severe. The peak discharge at USGS crest-stage gage Kaelepulu Stream Tributary (USGS sta. no. 16249100) was 40 ft^3/s for the storm of December 19, 2010. This peak has a recurrence interval of less than 2 years based on 45 years of data for this site. Flow from the January 12 event was not sufficient to register on this same gage.

2. Rainfall data from a private rainfall logger located approximately ½ mile from the project site indicates that the December 19 event dropped 8.8 inches of rain in 24 hours. This corresponds to a 24-hour storm with a return frequency of about 9 years (Attachment A). The January 12 event was actually two small rain events (1.68 and 1.69 inches) that occurred in the early morning and late night extending into January 13.

3. Quarter-hour increment water quality (turbidity) readings at Lanikai bridge demonstrating outflow of turbid water to Kailua Beach for 3 days following the 12/19/2010 storm. (Attachment B)

4. Quarter-hour increment water quality readings (turbidity) at City Drain outlet # 27484 (Point A2) to Kaelepulu Pond for 2 days during 1/12/2011 rainfall event (Attachment C) showing turbidity levels exiting the drain to be consistently above 1,000 NTU.

5. Water Samples from Inlets to the City storm drain system at Points A1 and B1 from the construction site, Point A2 City drain outfall to Kaelepulu Pond, from the center of Kaelepulu Pond, and from the outfall of the stream to the ocean (Attachment D) showing turbidity in excess of 1000 NTU in the City storm drains and TSS readings as high as 25,000 mg/l in water taken from City storm drains immediately below the construction site. The State Standard TSS for estuaries is 5 mg/L (15 mg/l for Pearl Harbor).

Sample Site	Field ID #	Date	TSS mg/L	Description
Lanikai Br.	1	Dec-19	176	Stream mouth at Kailua Beach, 1 ft
Lanikai Br.	2	Dec-19	148	Stream mouth at Kailua Beach, 3 ft
Lanikai Br.	3	Dec-19	45	Stream mouth at Kailua Beach, 1 ft
Lanikai Br.	4	Dec-19	53	Stream mouth at Kailua Beach, 3 ft
Lanikai Br.	5	Dec-20	27	Stream mouth at Kailua Beach, 1 ft
Lanikai Br.	6	Dec-20	24	Stream mouth at Kailua Beach, 3 ft
B1	CD 7	Dec-19	7,640	Construction site runoff at LakeView
A1	Gren 8	Dec-19	1,788	Construction site runoff at Akiahala
A1	8	Jan-12	2,000	Construction site runoff at Akiahala
B1	9	Jan-12	25,000	Construction site runoff at LakeView
A2	10	Jan-13	400	City outfall to Kaelepulu Pond
B1	11	Jan-13	532	Construction site runoff at LakeView
Pond 1	12	Jan-13	21	Pond center at surface
Pond 4	13	Jan-13	14	Pond center at 4-foot depth

6. Aerial photographs of mud plumes in Kaelepulu Pond emanating from City drains fed by runoff from the Delta project site. Photo documentation of sampling events, construction runoff, and impounded sediments within small sediment trap constructed at the end of city Drain outlet #27484, Point A2. Spreadsheet log of photo descriptions (Attachment E)

7. Key photographs extracted from photo log (Attachment F).

8. Video of flows at Point A1 and B1. Copies of all photographs (CD Attached)

We are not implying that Delta Construction or their sub-contractors failed to correctly install or maintain the BMPs indicated in their NPDES permit conditions. We have not physically reviewed the status of BMPs on their construction site. However, we feel that the level of protection offered by the designed BMPs is not adequate to reach the level of control specified in the permit. The BMP plan (underlined for emphases) states:

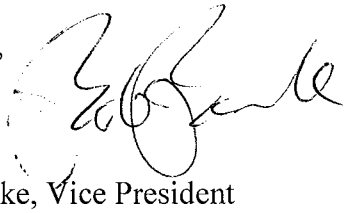
> *(c) Structural Controls*
>
> *(1) Storm water flowing toward the construction area shall be diverted by using appropriate control measures, as practical.*
>
> *(2) Erosion control measures shall be designed according to the size of disturbed or drainage areas to detain runoff and trap sediment.*
>
> *(3) Water must be discharged in a manner that the discharge shall not cause or contribute to a violation of the basic water quality criteria as specified in HAR, Chapter 11-54, Section 11-54-4.*

The portion of the site hydrology study dealing with construction phase states:

> ii. Quality of Discharge – The in-situ/rock, predominately highly to moderately weathered Tuff, will be exposed during the grading operations. All excavated material will be contained onsite and will not be allowed into the drainage system during a rainfall event.

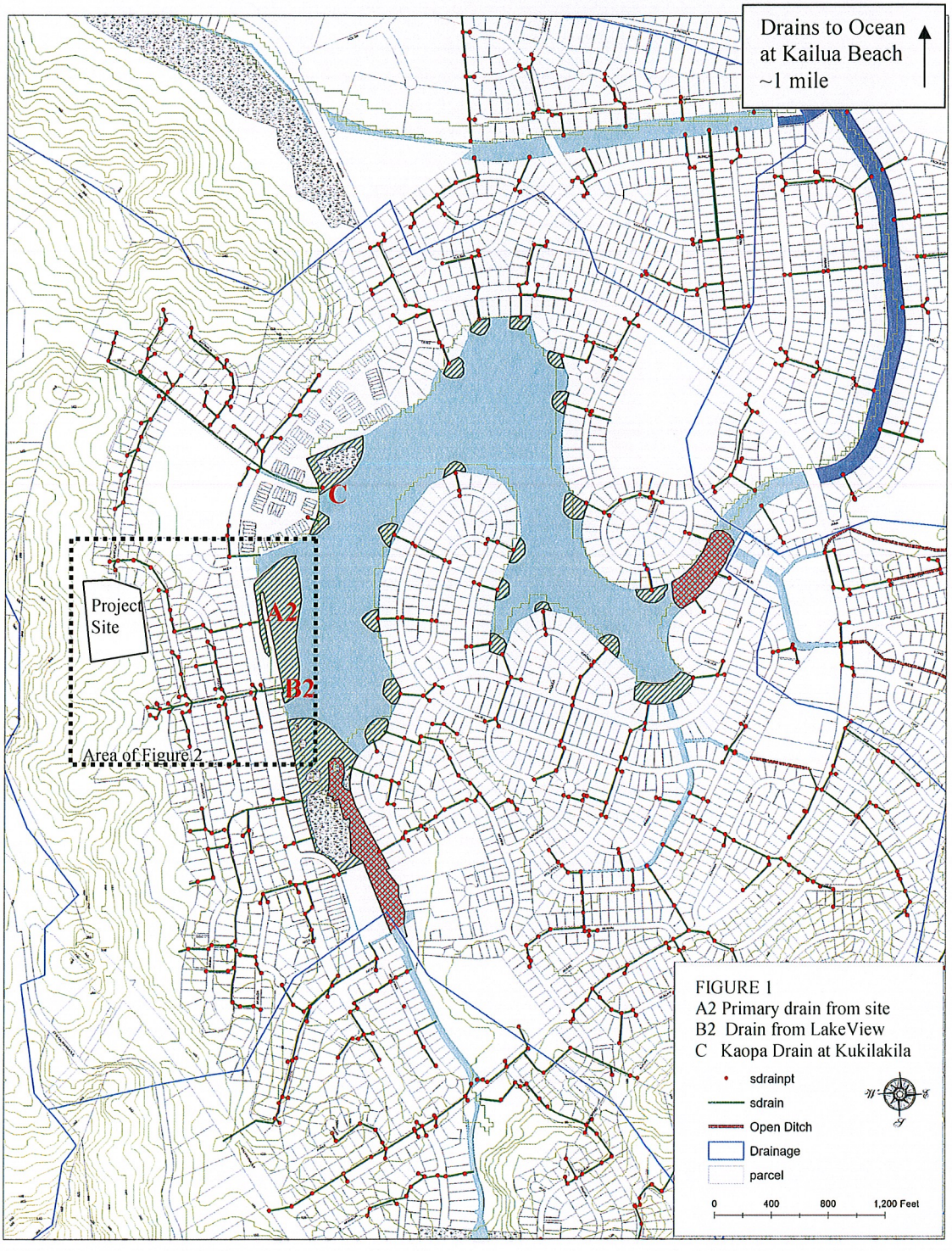
Based on the attached evidence we believe that the contractor has not met the above conditions stated in their permit and request that the State DOH enforcement branch issue citations to Delta Construction for these permit violations. In addition the ELRA would like to be made aware of design improvements to the BMP plan intended to control sediment from future storms that will impact the construction phase of the project as well as enhancements to the permanent BMPs for long term pollution control. We will be contacting Delta Construction to ask them to compensate for sediments introduced to Kaelepulu Pond by dredging sediments from areas that have become shallow as a result of prior runoff through City storm drains. However, if ELRA continues to receive little or no cooperation from Delta construction in this matter, then it will be our intent to seek compensation for damages in State Court under the Clean Water Act.

Sincerely,



Bob Bourke, Vice President
Enchanted Lake Residents Association
PO Box 1485
Kailua, Hawaii

Cc: Hudson Slay, EPA Region 9
Gerald Takayesu, C&C Honolulu Environmental


Drains to Ocean
at Kailua Beach
~1 mile
C
A2
B2
Project
Site
Area of Figure 2
FIGURE 1
A2 Primary drain from site
B2 Drain from LakeView
C Kaopa Drain at Kukilakila
sdrainpt
sdrain
Open Ditch
Drainage
parcel
0
400
800
1,200 Feet

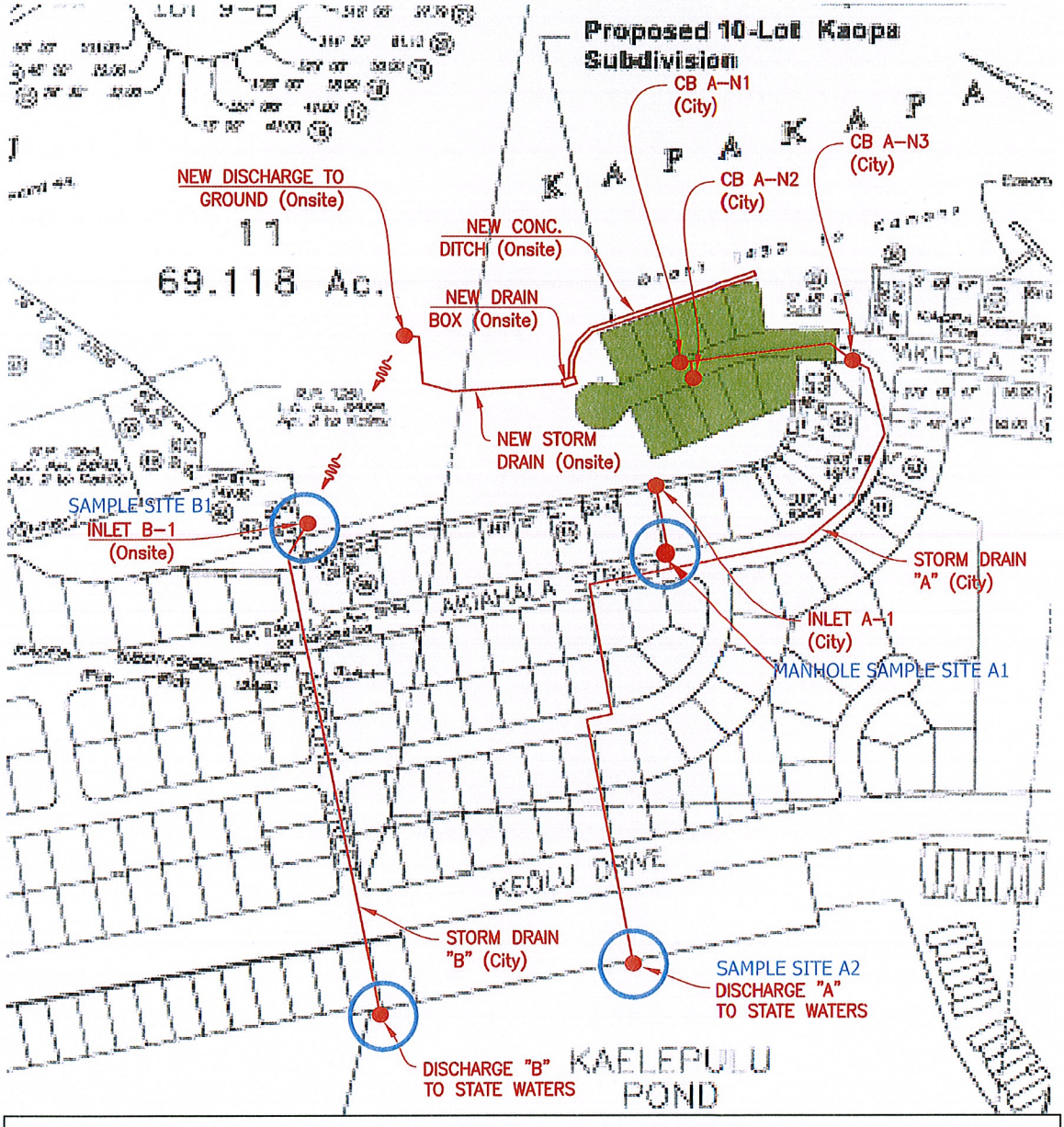


Figure 2. Site map showing inflow points to City storm drains (B-1, and A-1), and outfall of these two drains to Kaelepulu Pond. Water quality sample site locations indicated. [map copied from project hydrology report submitted with permits]